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# PRESIDENT'S MESSAGE

By Frank W. Edwards

## "INDOCTRINATION NEEDED"

Do you realize that you may expect to live 20 years nger than your great grandfather largely because of e work of members of the engineering profession?

The general public assumes the medical doctor is responsible for this remarkable increase in the span of human life. He is only partially responsible. It is not my purpose to detract from the excellent work of the medical profession, but rather to call attention to its highly respected position. The sanitary engineer undoubtedly has contributed more toward increasing longevity than any other person. Engineering developments produce neficial drugs economically thereby permitting their despread use for curing the sick. The medical pro- ssion would be handicapped if engineers failed to velop these medicines for a price their patients can y. All branches of engineering have helped to make is economical production possible.

There are many reasons why medical doctors have the spect of the general public. One important one is an tgrowth of the attention the medical profession gives professional indoctrination of its students in college. his subject has been discussed with one of the top offi- als in the American Medical Association.

An attempt will be made here to summarize briefly a w main points emphasized by Edward L. Turner, M.D., cretary of the council on medical education and hos- tals. These remarks, of course, are my interpretation what was said by Dr. Turner. In some cases he implied rtain meaning without making a direct statement. his, of course, is understandable.

Indoctrination begins at the time application is made r enrollment in the medical college. In addition to nsideration of academic record, results of aptitude sts, and references selected from among the science d liberal arts professors, the medical college admissions mmittee conducts personal interviews with the appli- nt. This interview presents a wonderful opportunity r initial indoctrination.

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## WHERE WE STAND IN ISPE HISTORY

By L. D. Hudson and A. C. Kessell
From Capital Chapter's *THE CHATTER*

The 73rd Annual Meeting is now history, and from here on will be recalled as one of the most fateful meetings in the history of the ISPE.

A complete new slate of officers has been installed and a clear break in continuity has been effected which places a burden on these new officers unprecedented in the past.

The new board, in keeping with the mandate of the membership expressed in the election of these new officers, has empowered them to employ a new executive secretary and establish a new location for the State headquarters. Either of these tasks in itself carries a huge responsibility. The choice in either case will be subject to much comment, pro and con.

Especially consequential, is the task of changing the location of the State headquarters. Regardless of the selection made, the officers will be subject to criticism. They cannot win UNLESS the move is an outstanding success and immediately improves the operation of the office in a manner satisfactorily recognized throughout the Society.

The board empowered the new executive committee to perform these tasks with no further instructions than

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## PRESIDENT'S MESSAGE (Cont'd)

Formal college courses also are used for indoctrination. Although the specific methods for handling this particular area vary in different medical colleges Dr. Turner, who was the founder and first dean of the college of medicine at the University of Washington, explained some of the formal courses presented there. In the freshman year the history of medicine is presented in relation to periods of time in which medical practice occurred. Citizenship is stressed throughout. As far as ethics are concerned reliance is placed on example. Other courses of professional nature are given in the sophomore and junior years. Between the junior and senior year each student is assigned to live with a selected medical doctor. He accompanies the doctor on all calls. If the doctor is called in the middle of the night the student gets up and goes along. Of course special emphasis is given in selecting the doctors for such assignments.

In the senior year a series of lectures is presented. Specialists in the various fields of endeavor are invited to talk about the relationship between their particular occupation and that of medicine. For example, a public health officer, a banker, a lawyer, an economist, a labor leader, a Protestant, a Catholic and others present these lectures.

The Hippocratic oath or modification of it is administered by a majority of medical schools sometime during the college course.

Early practice in the medical profession is closely associated, in fact integrated, with the educational program. Schools and hospitals are controlled by the medical profession. In engineering the profession has evaded its responsibility for providing fully adequate professional education. The job has been delegated largely to academic personnel. It is discouraging to find so many within the academic field as well as engineers in the profession who seem to believe teachers belong to a profession unto themselves. How can anyone teach engineering without being an engineer first? How can anyone teach, either formally or by example, professional consciousness if experience is limited to one narrow field of academic pursuit?

Engineering needs a program of indoctrination supervised and controlled by the profession. It is the responsibility of ISPE to work toward such a goal. We are hopeful that our education committee will lead the way.

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**Ray and Darlene Carroll** are planning to stay pretty close to their home at 3 Illini Circle, Urbana, this summer. No formal vacation is planned. You know how it is with young children. John R., Jr. is 6 years old but sister Virginia is only 3. A trip for any distance is pretty hard on the little ones. Anyway, the Urbana-Champaign area is a pretty nice place to be in the summertime, as it is throughout the year.

## SOON WE WILL BE 17!

Soon we will be 17! That is the consensus of the engineers who met at Freden's Restaurant in Hinsdale Tuesday, May 27, 1958.

Donald S. Mogowan, Vice President of ISPE, gave the main address and explained the benefits of ISPE and NSPE. A number of questions were asked by those present and were answered by Chairman Bob Hunter and Frank Edwards, ISPE President. Preceding the meeting, a questionnaire was sent to 1300 registered professional engineers in the area bounded by Harlem Avenue, North Avenue, Naperville, and the Sanitary Canal. Complete results have not been tabulated but as of May 26, the count was as follows:

| | |
|---|---|
| Total Returns . . . . . | 200 |
| In Favor of West Suburban Chapter . | 99 |
| Not in Favor . . . . . | 68 |
| Engineers who Have Moved, Retired, etc. | 33 |

Of the 99 in favor of a new chapter, 66 are not ISPE members. Of the 63 engineers present at the dinner 28 were members of ISPE with 16 of the 28 willing to become members of the new chapter. Of the non-members 12 indicated their willingness to join the ISPE and the new chapter.

Chairman Hunter is starting the "follow up" action by appointing a committee consisting of an ISPE member and a non-member from each community to sign the non-ISPE-members and to contact each of the members to have a full-fledged chapter in progress next Fa

A number of guests and members of other chapters were present who will assist and guide the new chapter. Some were Robert A. Brown, National Director; J. E. Scott, president of DuKane Chapter; Howard H. sert, president of the Joliet Chapter; Gerald Mar secretary; and Bill Jacobs, treausrer of the Chica Chapter.

The new chapter does not yet have a name. All su gestions will be appreciated. Send suggestions to a of the following committee members: Bob Hunter, Ral Michael, Dale Hammond, and W. C. Freeman.

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**Jess Dietz** of the Champaign County Chapter receiv his doctor's degree at the University of Wisconsin 1947.

Jess is a member of the American Waterworks Assoc tion, the American Society of Civil Engineers, the Am ican Public Health Association, the American Pub Works Association and the Central States Sewage a Industrial Wastes Association as well as the Illin Public Health Association.

He was a good student at Wisconsin and was elec to the engineering honoraries Tau Beta Pi and Chi Ep lon as well as Pi Mu Epsilon. He is a member of the c sulting firm of Clark, Daily & Dietz with offices at North Race Street, Urbana, Illinois.

Jess and Ellen Dietz live in Champaign at 1302 So Elm Street.

# Assistants to President Named

Clifford E. Missman, of the Rock Island consulting
n of Missman, Stanley, Farmer and Associates, has
n named assistant-to-the-president and coordinator of
professional group of state committees.

Cliff received his BSCE degree from the University of
nois in 1933. He worked for "Chuck" Willett, con-
ing engineer, in Dixon before becoming assistant
uctural engineer of design for the T.V.A. During
rld War II he was commissioned a lieutenant com-
nder in the civil engineering corps of the U. S. Navy.
is a registered professional engineer in Illinois and
a and is a licensed land surveyor in Illinois.

Since formation of the Missman-Stanley-Farmer part-
ship, the firm has been busy on various municipal
jects and in recent years has undertaken some size-
e highway projects on the Inter-State system.

Missman served as vice president and president of the
st Central Chapter and as its chapter representative
1957-58. As assistant to the president, he will be in
rge of the following committees:

Education
Employment Practices
Ethics and Practice
Fees and Salaries
Legislation
Young Engineers

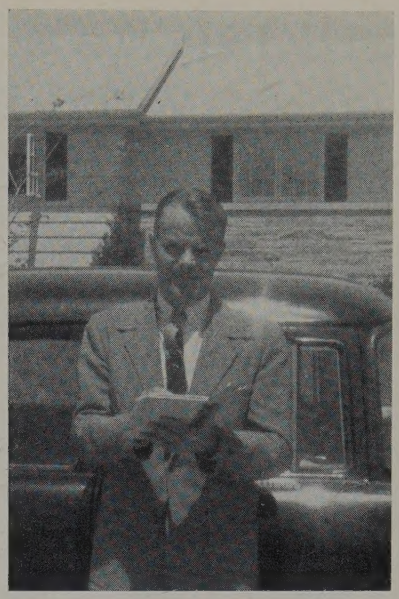
eVerne D. Hudson has been appointed as Assistant
President Frank Edwards with charge of the Public
ations Group of Committees.

The Committees with which Mr. Hudson will be work-
are as follows:

Building and Construction Codes
Civil Defense
Inter-Professional Relations
Publications
Public Relations
Resolutions

Verne Hudson is Regional Sanitary Engineer for the
Illinois Department of Public Health, Springfield,
ing served that agency since 1936. He is a graduate
the University of Illinois with a Bachelor of Science
Civil Engineering degree. He received a master's
ree in Public Health Engineering in 1952 from the
iversity of Michigan. In World War II he served as
jor in the Sanitary Corps, AUS on special assignment
three years to the government of Colombia, South
erica. Prior to his present post with the Illinois De-
tment of Public Health, Hudson was Principal Sani-
y Engineer, State Properties Section of the Division
Sanitary Engineering for that Department.

Hudson is an active member of the Capital Chapter
h service as treasurer, secretary, president, and rep-



**Assistant-to-the-President Verne Hudson outside his new home in Springfield.**

resentative to the State Board of Directors for the past three years. A licensed professional engineer, he is a member of the American Public Health Association, the American Water Works Association, and the Federation of Sewage and Industrial Wastes Association.

The Ladies Auxiliary of the St. Clair Chapter have invited all chapter members to the picnic to be held Saturday, June 28.

**WHERE WE STAND** (Cont'd)

to use its best judgment for the benefit of the Society; however, a resolution was passed by the board recommending the favorable consideration of Springfield for the new headquarters location. This resolution was passed by a majority vote and was not unanimously endorsed.

It is very obvious that moving of the State office to Springfield, or any other location could, and will, cause favorable and unfavorable reactions bearing on harmonious progress. Those in favor of this move should not gloat; rather, they should dedicate all their efforts to assist the new officers in their task and intensify their efforts in behalf of the Society to insure its success. This is not a matter to take lightly—the Society cannot afford a failure in this effort. The responsibility does not lie on the new officers alone, it is a burden of each and every member of the ISPE to see that this Society continues to function and grow and to serve its membership in a manner for the good of the profession. WE MUST NOT FAIL!

It is the hope that each and every member will be inspired with a new vigor to the point of active participation in the promotion of the Society in all its efforts. It's time to do your part—get a new member.

L. D. Hudson
A. C. Kessell

# IS UNIONISM OF THE ENGINEER IN CONFLICT WITH PROFESSIONALISM?

*This is one of the three prize-winning papers presented at the February, 1958 Convention of the American Society of Civil Engineers, held in Chicago. The statements contained herein are those of the author and do not necessarily reflect the opinions of the* ILLINOIS ENGINEER.

By CLAYTON H. STIMMEL
*Student at Ohio Northern University*

Two rude awakenings faced the people of the U.S.A. in 1957. One was the launching of the Russian satellites before an American satellite. The other was the exposure of corruption prevalent in unions controlled by labor racketeers and gangsters throughout the United States.

The review of the perversion of labor leaders and their recourse to aberration suggests an evaluation of our professional engineers' organizational activities. Typical questions of high priority might be: Are there signs of decay, deterioration, graft or corruption in any of our present professional societies? We have professional societies encompassing some seventy or eighty branches of engineering—is there a unified desire or a need to reorganize into the modern hysteria of unionism? We can wager that elections of officers in our engineering societies are not "rigged" nor is there a clamoring for the positions. Our officers serve with the attitude that there is a job to be done and it falls to someone's lot to do the best he can. These questions, however, do lead us to the $64,000 question: Is unionism of the engineer in conflict with professionalism?

Let us define unionism and professionalism by discarding all the cloaks of flattery, bias, predilection, or promise.

"Unionism is a comprehensive term denoting such activities as are designed to unite all those employed in trade, industry, profession, shop, or locality into an organization for the raising of wages and the improvement of working conditions. Job security and seniority are primary factors."

Unions have not always accomplished these goals peacefully over a bargaining table. They have often resorted to forceful means to attain their ends. In many of these instances property, both company and private, has been destroyed. Many times, workers on prolonged strikes have been forced to liquidate their homes that were built or bought on very small initial payments. Strikers, out of necessity to feed their families, have had to resort to "yellow-dog" tactics, such as working out of their classification in other factories in order to have an income,—yes, even to provide a decent Christmas for their children.

What feeling did the union man possess when the strike was settled and he went back to work? He w either subdued and resigned to his fate, or arroga saying, "Well, we won that one," or "It won't need happen again." Either attitude was a culmination the defeat suffered for a meager gain in hourly rate other benefits. From this point on, his attitude a union member is concerning himself with security, a job. These conditions instill into the strikers a deg of hate. Will men who are conditioned to hate, be t type of men who would make good supervisory e ployees? An official of General Motors has stated th 50% of its top executives have risen from engineerin Could this same statement be true after 25 years of co ditioning to hate the management?

Under the protective wings of unionism, the unio ized man also knows he will not need to do any wo outside his rigid classification and predetermined r of production.

Professionalism is defined as the following of a call or profession in which men are or claim to be expe It includes the conduct, aims and qualities characteris of a profession as opposed to amateurism.

*"Professionalism, as opposed to amateurism, mo over, instills into an individual the awe-inspiring ch enge to strive constantly for an utopian goal of perfect in every final result. It is simple to conceive that men a profession who are teeming with creative imaginat will obtain high salaries without the aid of unionism* (Webster)

True professionalism in an engineer is often kept a by his everlasting memory of achievements made poss by those paragons of patience, his former educatio instructors. Many men are goaded onward because t are trying to carry out the ideals set forth by th former school teachers. Professional conduct in en neering is further exemplified by the high moral cal of "The Canon of Ethics" and "The Faith of an E neer" to which he once committed himself.

Unionism and professionalism of an engineer may likened to the terms *mediocrity* and *extraordinary ficiency*. The professional man is traditionally one follows the pursuits of a learned or scientific voca in order to devote his life to the betterment of human The true professional man does not allow his thoug of compensation to outweigh his desire for service. will thereby be striving to repay his debt to society only remotely will he be thinking of the compensa due him for his efforts.

The unionized man, however, will be thinking f most of compensation and secondly of doing just enou work to hold his job. This attitude is a serious th to the security of our nation many years hence.


National Director Cecil J. McLean presenting the monetary ward to Ohio Northern U. civil engineering student Clayton H. immel at the ASCE national convention which was held in Chigo last February. Mr. Stimmel's paper appears in this issue of e ILLINOIS ENGINEER.

As I was writing this last December, I happened across n article in the *Chicago Daily Drover's Journal* in which iat newspaper paid high tribute to an American rocket oneer, Dr. Robert H. Goddard. Today, the late Dr. oddard is recognized as the grandfather of space travel. e broke away from solid fuels and experimented with quid fuels. He produced the first gyro stabilized rocket id pioneered the bazookas. In 1919 he theorized that ith the employment of more than one stage, a rocket ould be sent up specifically to 580 miles, roughly the vel at which the first Russian satellite went into orbit. ike many pioneers, Dr. Goddard (a physics instructor), alked a lonely road; he was often ignored and often oked for financial aid to continue his work. This is ie type of devotion we, as professional engineers, owe ir children and our grandchildren so that the many ardships undergone by our pilgrim forefathers will ot have been in vain.

Engineering is and always will be one of the basic ocations responsible for the application of scientific disoveries in our nation, and the position our nation plays n world affairs. Do not hamstring the engineering proession by tying it to false ideals. Unionism of the engieer *is* in direct conflict with professionalism. It serves stultify the true evaluation of worth through seniority id other restrictive clauses. It causes surrender of ghts and subjugation of the individual.

In the current effort to organize an engineers' union, ie many pitfalls of the movement are evident. Since 953 when the initial movement began with the formation f the Engineers and Scientists of America, the federaon grew to a membership of 40,000. Of this number, nly 3,000 were bona fide civil engineers.

These figures along with the fact the ESA last June 1 oted to limit its membership to professional engineers, learly indicates that many more technicians are interested in riding on the shirt-tails of professional engineers than there are bona fide engineers working toward unionism.

The unionizing group is already split. Because of the limiting of membership, a new group formed called the Engineers and Scientists Guild. Their attitude is that membership should include technicians as well as professional engineers.

A sounding of hysteria is prevalent in the formulation of the Engineers and Scientists Guild's budget. Most of the present sponsors favor a national assessment of fifty cents a man per month to amass quickly an emergency or strike fund and to accumulate money for research into organizational problems, publicity and membership.

Many of the professional problems of engineers would be solved in large part if employers and the public would understand clearly that "engineer" and "technician" are not the same. "Engineer" in a proper sense means one who has established his qualifications for a professional classification and recognition. A technician is more often skilled in only one phase of a profession, i.e., detail work such as drafting or designing, etc.

It is significant for students who are presently working for their academic engineering degrees and full fledged men of the profession alike to remember that professional organization of engineers in America was initiated with the founding of the American Society of Civil Engineers in 1852.

Today there are about 70 national professional organizations of potential interest to engineers. These societies all propound the fact that employers are always most anxious to hire the type of person who will do, on his own, more than the job requires. The student who keeps this in mind during his training period will prepare himself for the background that places him in the classification of professional engineers rather than a technical group which relies upon professional men to keep it working.

Furthermore, unity of the professional engineers can be accomplished by following Mason G. Lockwood's advice in the August 1957 issue of *Civil Engineering*, "Practice unity assiduously at state and local levels. Bombard your governing bodies with your expressed yearning for genuine national unity. Worry them to death about the matter! Never let up!"

Let us all be drivers rather than followers. Back up Mr. Lockwood's advice and have strong professional organizations which will keep ability, desire, and initiative in the limelight rather than forceful action by unions.

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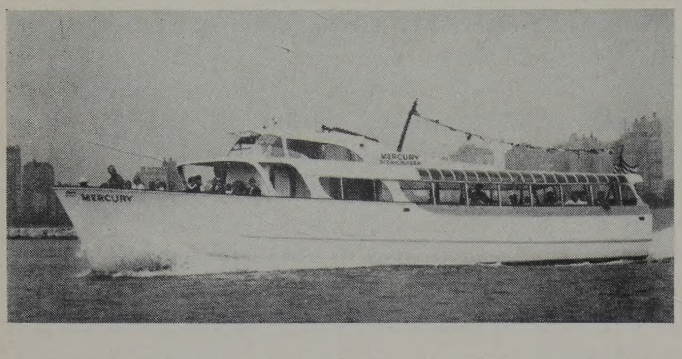
There are but two great realities in the vast universe—the heart of God and the heart of man, and each is ever seeking the other. It is this that makes adventure for God not an experiment, but a certainty.—Charles Brent.

# NEWS OF THE CHAPTERS

## CHICAGO CHAPTER SETS CRUISE DATE




On Saturday, September 6th, the Chicago Chapter will be host for a boat trip which will take 85 members and their guests through the locks of the Chicago River into Lake Michigan, South to Lake Calumet and down the Cal-Sag Canal before returning via the Sanitary and Ship canal to the Chicago River. The all-day affair will include breakfast and lunch aboard and will be open to members of other chapters. Cost is $6.50.

The all-weather boat is the *Mercury* which has been chartered by the Chicago Chapter's Inspection Trip Committee. Reservations should be made by contacting Mr. Kenneth Cook, P.E. at DeLeuw, Cather and Co., 150 North Wacker Drive, Chicago 6, Illinois. Children over 12 years of age are invited.

## EVERITT ADDRESSES IIT GRADS

Dr. William L. Everitt, dean of engineering at the University of Illinois, will present the Illinois Institute of Technology commencement address Friday, June 6.

Some 375 undergraduates and graduate students will receive degrees from Dr. John T. Rettaliata, Illinois Tech president, during the commencement exercises at 8:15 p.m. in Orchestra Hall.

Everitt is a member of the Champaign County chapter of ISPE.

A member of the Department of Defense research and development technical advisory panel on electronics, Everitt is on the board of editors of the Institute of Radio Engineers. He is 1954 recipient of IRE Medal of Honor, and 1946 recipient of the Exceptionally Meritorious Civilian Award.

Everitt, past president of the IRE and the American Society of Engineering Education, is past chairman of the Engineering College Administrative Council. He also has been on the board of directors of the American Institute of Electrical Engineers and IRE.

Director of the operational research staff in the office of the chief signal officer, U. S. Army, from 1942 to 1946, he also has been a member of the communications section, National Defense Research Committee and of the electronics committee, Joint Research and Development Board.

## NCSBEE MEETS IN SPRINGFIELD

The National Council of State Boards of Engineering Examiners held its Central Zone meeting May 2 and 3 at the Leland Hotel in Springfield. The Capital Chapter and the State Board of Engineering Examiners were hosts. Tula (Mrs. Carter) Jenkins, Ellen (Mrs. Ray) Tilly and Mrs. Herbert Brantley arranged a program for the wives who accompanied their husbands to the meeting.

Among ISPE members who are members of the State Professional Engineers' Examining Committee are Dr. Edwin R. Whitehead, chairman; Melvin Amstutz, Andrew W. Neureuther, Dr. Thomas C. Shedd, and Ray V. Tilly.

Dean Collins was chairman of the committee which made arrangements for the successful meeting.

## CAPITAL CHAPTER VIEWS TOMORROW'S HIGHWAYS TODAY

The Capital Chapter, in its May 27 meeting at the Elks' Culb in Springfield, enjoyed Charles R. Shupe's illustrated talk, *Tomorrow's Highways Today.*

Chapter President Herbert L. Brantley complimented Shupe, a staff engineer with De Leuw, Cather and Co. of Chicago, and assured him that it was one of the most successful meetings. Among the 55 members present were a number of State and Sangamon County highway engineers, consultants and engineers with the Portland Cement Association. Shupe paid tribute to the Capital Chapter's publicity committee for their good turnout and for press releases which appeared in two Springfield papers.

Shupe, whose hobby is photography, showed colored slides of many recent highway projects on which the consulting firm of De Leuw, Cather and Co. has been engaged.

## ROCKFORD CHAPTER AUXILIARY

Congratulations to the Women's Auxiliary of the Rockford Chapter for the inspection trip they conducted on Tuesday evening, May 20. Fifty women, including wives of engineers who were taking the refresher course, toured the new Rockford YWCA building. It was appropriate that Olga (Mrs. Royce E.) Johnson was tour leader, for she served on the Building Committee and planned the beautiful new kitchens which were admired by the guests. Hostesses at this meeting were Mrs. Harry H. Cordes, Mrs. John G. Shedd, and Mrs. Edwin L. Young. Ruth Cordes' husband is a consultant in Dixon; Mrs. Shedd's mate is a designer with the Barber-Coleman Company of Rockford; and Thelma Young's husband is superintendent and engineer for the Richard Main Company of Rockford.

## DUKANE HONORS 101ST MEMBER

Left to right: Ben Houden, Sec.-Treas. DuKane Chapter; Dick ash, Charter member and past president, DuKane Chapter; Jim cott, Pres. DuKane Chapter; Ray Harris, 101st corporate mem- er, DuKane Chapter.

Richard T. Cash, past-president and one of the found- rs of the DuKane Chapter honored Raymond Myren Harris as the 101st member of the chapter during the hapter meeting on May 15.

Following the presentation to Ray of a chapter dues efund check, Dick Cash gave a brief outline of the Chapter's history. After outlining some of the trials nd tribulations of the past 11 years, he spoke of DuKane Chapter accomplishments such as the refresher course eld annually for engineers desiring to take the examina- ion for registered professional engineer. Cal Brown, ity engineer of Elgin and chairman of the Chapter's efresher course committee, reported on last spring's nrollment of 37, all of whom took the examination early his month.

Ray Harris, the lucky 101st member, graduated from Tri State College, where he was elected to Tau Beta Pi. He works for the District One office of the Illinois Divi- ion of Highways in Elgin.

The Harris family (two boys) live in Mount Prospect.

Cash was District One engineer until he retired a few ears ago. His successor is Donald S. Mogowan, vice resident of ISPE.

George M. Booth, Jr. was elected to serve as repre- entative to the state society's board of direction, the acancy having been created because of membership xceeding 100. The DuKane Chapter now has 104 cor- orate members.

Fifteen members of the Joliet Chapter headed by the resident, Howard Hassent, and National Director, Robert A. Brown, were present at the meeting which vas held in Aurora.

# Items of Personal Interest

**Warner A. Johnson,** who works for the Micro Switch Div. of Minneapolis-Honeywell Regulator Co. in Freeport will combine his scouting activity with family fun. Sarah, Warner and the children will load up with camping equipment and head southwest. The family plans to camp along the way to Cimarron, New Mexico where Warner will join with his explorer scouts on their training outing. He and his family will see Estes Park and Dallas before returning.

The **Bill Oliver** family will return to Wisconsin for their vacation. They have a cottage on Squirrel Lake which is about 14 miles west of Minocqua.

**Ed Hopkins,** Chief Engineer for the Rotary Division of the Miehle Printing Press and Manufacturing Company is a new member of ISPE. Ed and Dorothy Hopkins reside at 4824 Wabansia Avenue, on the northwest side of Chicago. He has attended the University of Chicago and Armour Tech (now the Illinois Institute of Technology).

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All true peace lies in forgetfulness of self, which can only be found in God. Once gain this, and neither earth nor hell will prevail to trouble you, or disturb your rest in your Lord and His Holy Will.—J. N. Grou.

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## PROFESSIONAL RESPONSIBILITY AND THE ENGINEER

By Anthony S. Zummer, P.E.
*Member of the Illinois Bar*

In our engineering profession, as in most other pursuits, we are confronted with a few people who lack the moral standards, and sometimes the intellectual capabilities, necessary to produce the quality of work that the public health and welfare demands. Though the activities of these inadequately-talented people are recognized as undesirable, many engineers assume the attitude that the State, or "someone else," should shoulder the responsibility of eliminating this evil from the community.

Ordinarily, the attention of the State or any other governing body is not drawn to a violation of one of its licensing laws until damage is done to an innocent party. However the medical and legal professions have taken the initiative to protect the public before any such damage is done by an unauthorized practitioner by establishing "complaint departments" which are open to the public as well as members of the professions. Since the public now expects all of the professions to weed out quacks, the engineering profession, likewise, has its responsibility in this respect.

Though the responsibility lies with the profession, each member of the profession must assume his share of the burden; and as leaders of the profession, members of ISPE have the obligation to show the way. Each member must do his part to eliminate undersirable activities in his community by taking definite action. Action may take any of a variety of forms. For instance, the member may call the quack to the attention of the Society, or the member may simply inform him of the existence of the Illinois Professional Engineering Act and some of its provisions. Finally the member may go so far as to swear out a complaint to institute criminal action against the offender.

Some members rationalize that a particular quack is really qualified to perform the engineering work that he has undertaken, so there is no harm to the public. This rationalization is erroneous for several reasons. In the first place, if the quack is qualified, then he should have no trouble obtaining a license; but if he does have trouble, he is not qualified. Secondly, *such a person* is of questionable morality since he wilfully violates the law. Furhermore, the member is placing himself above the authority of the State, so that no licensing provision would be effective if everybody were to determine independently the qualifications of the individuals practicing.

It is clear that the engineer must take it upon himself to see that engineer-quacks are eliminated from his community. Only through professional engineers militant activities will the public be given the protection to which it is entitled under the law. Then the engineering profession will have the necessary stature so that a cesspool cleaner won't dare call himself a Sanitary Engineer.

# The Engineer and the Grasshopper

By Dale V. Hammond, P.E.

A grasshopper landed on an engineer's desk. Idly he wondered if he could train the creature to obey him. It wasn't long before he taught it to jump over a pencil. The engineer would say, "jump," and over the grasshopper would go. He would again place the grasshopper near the pencil and give the command. Each time the six-legged insect would obey. Then he pulled off the anterior legs and ordered the grasshopper to jump. The grasshopper jumped over the pencil. He then pulled off the middle legs; still the grasshopper jumped on command. Finally, he removed the posterior legs and gave the command. The grasshopper remained motionless. After a few minutes' deliberation, the engineer recorded in his log book: "A grasshopper loses its hearing when you pull off its legs."

The engineer without registration is like the grasshopper without legs. He can't jump!

The Illinois Registration Act states that a person practices professional engineering if he plans or designs the physical parts of highways, railways, harbors and docks, air fields, power stations, sewage treatment plants, chemical plants, etc. According to the Act, a person practicing professional engineering must be registered and it is unlawful for him not to be. Following this statement, a number of exceptions are listed: The design engineer working as an employee or subordinate to a person holding a Certificate of Registration is not required to have a license; engineering officers and engineering employees of the United States Government do not have to be licensed; construction and maintenance engineers are not required to be licensed under the Act.

From such exceptions you can see that more than 90 percent of the design engineers in this state are not required to have a license. That is, 90 percent can't jump. The other ten percent are the chiefs, supervisors, and group heads who carry the responsibilities for projects.

One of the principal activities of ISPE is to encourage registration. Why? So the engineer can jump. Of what use, you might ask, is registration to this 90 percent who haven't the opportunity to jump? The answer, as is frequently the case, lies in what our experimenter did not do—he didn't ask a worm to jump because, obviously, the worm has no legs.

Most engineers are, by nature, ambitious. One of the necessary steps to realize those ambitions is to get legs. Get out and get registered! You are not likely to be asked to jump from the 90 percent group into the ten percent group until you show you are ready to jump.

---

Perhaps there cannot be a better way of judging of what manner of spirit we are of, than to see whether the actions of our life are such as we may safely commend them to God in our prayers.—Wm. Law.

## IMPORTANT

Dear Fellow Member:

A significant increase in membership would do much to stimulate the program of our Society. To effect this stimulation, we have embarked upon an ambitious membership campaign.

Our goal for the year is

**2000 NEW MEMBERS**

We have a potential source of over 10,000 registered professional engineers. We can reach this potential only through the concerted effort of every member. If each of you enlist one other member, we have it made.

The following pages are to provide help for you in selling ISPE. The last page of this spread is an application form for your use. **Clip it now and carry it with you.** Be ready for that opportunity to encourage a friend to join our ranks.

Be an enthusiastic member of the fastest growing Engineering Society in the Country.

YOUR MEMBERSHIP COMMITTEE

# MEMBERSHIP CAMPAIGN PROGRESS

| CHAPTER | 0 | 100 | 200 | 300 | 400 | 500 | 600 | 700 |
|---|---|---|---|---|---|---|---|---|
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| CAPITAL<br>Marcus J. Rice | | | | | | | | |
| CENTRAL ILLINOIS<br>Lawrence C. Auby | | | | | | | | |
| CHAMPAIGN<br>George L. Sodemann | | | | | | | | |
| CHICAGO<br>Charles Zanzie | | | | | | | | |
| DU KANE<br>Donald S. Magowan | | | | | | | | |
| EGYPTIAN | | | | | | | | |
| ILLINOIS VALLEY<br>James J. McNally | | | | | | | | |
| JOLIET<br>Bernard Anderhous | | | | | | | | |
| LAKE COUNTY<br>John C. Broecker | | | | | | | | |
| MADISON COUNTY<br>Clifford F. Abraham | | | | | | | | |
| PEORIAREA<br>Thomas N. Landes | | | | | | | | |
| ROCKFORD | | | | | | | | |
| ROCK RIVER<br>Ralph C. Davis | | | | | | | | |
| ST. CLAIR<br>E.W. Markwardt | | | | | | | | |
| WEST CENTRAL<br>Charles R. Roberts | | | | | | | | |

## HONOR ROLL

Watch this list grow.

Be sure your name is included.

| ILLINOIS SOCIETY | 0 | 500 | 1000 | 1500 | 2000 |
|---|---|---|---|---|---|
| Harold E. Sommerschield | | | | | |

# NSPE AND ISPE

*offer* **REGISTERED PROFESSIONAL ENGINEERS**

1. **MEMBERSHIP** *in the only active, established organization devoting its entire effort to the professional, ethical, economic and social aspects of engineering.*
2. **AFFILIATION** *with the only national society composed exclusively of registered engineers from all branches of the profession.*
3. **A SINGLE, POWERFUL VOICE** *which speaks for a cross-section of the engineering profession.*
4. **PERSONAL PARTICIPATION** *in its overall program for the advancement of professional ideals and concepts.*
5. **A CAMPAIGN FOR PUBLIC RECOGNITION** *of the profession's contributions to national progress and welfare.*
6. **A CONSTRUCTIVE PROGRAM** *designed to raise the economic and social status of professional engineers.*
7. **CONTINUOUS ACTION** *to improve registration laws and their administration.*
8. **STANDARDS OF PROFESSIONAL CONDUCT** *through its Canons of Ethics and continuous interpretation of this code in terms of current practices within the profession.*
9. **PROTECTION** *of the profession and the public against misrepresentation in engineering practices by those not qualified.*
10. **AN OPPORTUNITY FOR YOU** *to contribute suggestions and exchange ideas with members of all branches of engineering for the good of the profession.*
11. **A PROGRAM** *designed to offer the student engineer more adequate preparation for professional life.*
12. **CONSTANT EFFORT** *with the military to insure maximum utilization of the engineer in time of national emergency.*
13. **AN OPPORTUNITY** *to assist young engineers in meeting professional problems.*
14. **ON-THE-SPOT REPRESENTATION** *in national, state and local matters affecting the welfare of engineers.*
15. **UP-TO-THE-MINUTE REPORTS** *on legislative and legal events with which the profession is concerned.*
16. **AN ORGANIZATION** *to foster and stimulate engineering leadership in public service activities on a community, state and national level.*
17. **SUBSCRIPTIONS** *to national, state, and other publications as a part of membership dues.*

ILLINOIS SOCIETY OF PROFESSIONAL ENGINEERS, Inc.
817 Myers Building, Springfield, Illinois

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Date.....

*To the Board of Direction of the*
*Illinois Society of Professional Engineers:*

I hereby apply for admission to the Society as a.....
National, State, E-I-T, or Student
member. If admitted, I agree to comply with the terms of the Constitution and the Code of Ethics of the Society, and wish to be enrolled in the

.....Chapter.

**I. ALL APPLICANTS complete the following ten spaces:**

1. Full Name.....Name of Spouse.....
Last First Middle CHECK PREFERRE MAILING ADDRESS

2. Residential Address.....Phone.....
Street City State

3. Business Affiliation.....Position.....

4. Business Address.....Phone.....
Street City State

5. Registration.....Reg. Number.....
(Type of Certificate: Prof. Eng., Struct., etc. State Issued)

6. Engineering Field.....
(Civil, Electrical, Mechanical, etc.)

7. Technical Society Affiliations and Grade of Membership.....

8. Birth.....
Date Place Age Sex

9. Education.....
Years School Date of Graduation Degree Obtained

10. Recommended by.....

Signature.....

**II. If you are NOT REGISTERED as a professional engineer, structural engineer or an E-I-T, complete the balanc of the application form.**

Names, addresses, and professional connections of three persons who may be consulted concerning my qualif cations (preferably professional engineers who are members of this Society; action will be expedited b accompanying this application with the letters of reference).

1. .....
Name Title Address Member NSPE-ISPE

2. .....

3. .....

# The Lone Wolf

By Colin Carmichael
*Editor Machine Design*

(The following article originally appeared in *Machine Design* Magazine. It is reprinted here with the permission of Mr. Colin Carmichael, author and editor.)

Like some of his fellow engineers, Joe was the victim a defense cutback. After years of hearing about the ortage of engineers, he suddenly found himself part an apparent surplus.

An attractive job opening, for which he was well qual-d, came to his attention. In the course of interview he de a particular point of inquiring about company icy toward the professional status of engineers. In n he was asked about his own professional activities— what societies he belonged and the extent of his rticipation. The fact that Joe was not a member— tive or inactive—of any professional engineering iety placed him at some disadvantage in the ensuing cussion.

Society membership does not in itself create a profes-nal man, any more than does education or experience. it it does symbolize an attitude.

The nonjoiner's attitude may be compounded of pro-astination and a "what's in it for me?" viewpoint. Thereby he might appear to class himself with the followers rather than the leaders.

We'll be the first to agree that existing professional societies fall short of perfection. But when membership in a society totals less than 25 per cent of elegible engineers in the branch it serves—a not uncommon ratio—whose fault is it if the society appears to be dominated by a nonrepresentative group?

The engineer who is registered and belongs to one or more professional societies has stood up to be counted as a professional man. How professional he actually is depends, of course, on his participation in furthering the aims of the profession. His society simply provides machinery for such participation, in addition to opportunities to widen his horizons and his acquaintanceship.

Since his interview Joe has been much less vocal on the subject of professional recognition. He realizes that, as a lone wolf, he should not expect to hitch a free ride to professional status on the shoulders of others.

# ENGINEER UTILIZATION CONFERENCE

## DISCUSSION EMPHASIZES QUALITY

Engineers, administrators, and educators from Northern Illinois met in Peoria on May 6 and 7. They attended a conference on Efficient Utilization of Engineers and Scientists, jointly sponsored by Bradley University College of Engineering and the Illinois Society of Professional Engineers, under the auspices of President Eisenhower's Committee on Engineers and Scientists.

The major objective of this conference was to set forth policies and procedures for more efficient utilization of engineers and scientists, and to motivate conferees to take appropriate action to assure more effective use of such personnel in their own organizations. The President's Committee believes that striving for maximum effectiveness in the utilization of engineers and scientists is "good business," whether or not such personnel are currently in short supply in a particular area.

Dr. Maynard M. Boring, consultant to the President's Committee, set the guiding philosophy for this meeting when he remarked to the conferees that "Washington can't tell any of you how to run your own business—you can only tell yourselves."

At the conference banquet, Dr. Boring emphasized a need for re-evaluation of the educational program in our secondary schools. He noted that in Europe, the students earn many more foreign language, science, and mathematics credits than those here in the same year of schooling. Primarily as a result of this training, less than five percent of the European students fail to complete their degree requirements at the college level. This compares with approximately fifty percent of American college students who find our academic requirements too difficult to pursue to completion. Dr. Boring emphasized that space in our colleges and universities is already at a premium, and as increasing numbers of young people try to enroll, the situation will become more critical. In line, then, with the conference topic of "Efficient Utilization" he concluded that there is an urgent need to be more selective, and to choose higher quality students at the university level. In this way a higher percentage of students would carry their college programs through to completion.

One of the several topics discussed at the conference was, "The Professional Development of Engineers and Scientists." Mr. Warner A. Johnson, Coordinator of Sales Training for the Micro Switch Division of Minneapolis Honeywell Regulator Company, presided at this session.

Mr. R. J. Murphey, C.P.A., senior partner in the Decatur, Illinois firm of Murphey, Turnbull and Jones, led the first discussion at this "Professional" session.

Mr. Murphy, president of the Illinois Society of Certifi Public Accountants and vice president-elect of the Am ican Institute of C.P.A.'s, presented "An Outside Viewpoint." His abridged comments follow:

I consider it a privilege, indeed, to speak before a gr of professional engineers, because I have a great respect your profession. I am impressed with the many close simil ties between our two professions—engineering and accou ing—and in the personal traits, temperaments, and habits the people who devote themselves to our respective practi

I should like to make a few observations about the sh range aspects of our common problem. Let's admit that are essentially "do-it-yourself" people. Unless we are in c plete familiarity with every single detail, we run the risk losing the thread; perhaps some small omission may be f to the successful result. In some instances, fortunately t are rare, we find a reluctance to share the "know-how" fear that one may be discovered to be not quite as indispensa as had been thought. Now such practice puts a strain on manpower. When an accountant, or maybe an engineer, spent his full week at work, probably with overtime too, has conscientiously given you his "all"—*or has he?* T question is one of proper utilization, and it is serious. have been fighting this "do-it-yourself" attitude as the grea drag on the efficient use of our manpower. We have fo this fight really pays off, for several reasons:

1. It is possible to meet the critical shortage of professio talent by utilizing lesser-qualified personnel under cl supervision. It need not dilute the quality of the w done.
2. It enables the professionals to do further planning, a allows others to help contribute their share in the de work always necessary to complete projects.
3. It lessens the strain of long hours of concentrated w on the most valuable personnel, which can and does w out.
4. It provides time for creative and imaginative think by those best qualified to do it.
5. It speeds the development of less experienced perso under the guidance of top-level talent.

This problem is two-fold:

1. Try to make the most out of available talent.
2. Recruit and train reinforcements to fill the ranks the future.

We must make our professions so attractive by our exam and our influence that youngsters will say, even at the

kletter stage and age, "When I grow up I want to be engineer—or (may I hope) an accountant."

)ne of the nicest satisfactions which has come my way in the fact that all three sons of one of our neighbor ilies are now C.P.A.'s; my own "boys" were both girls, the lads used to come over to visit with me about their er problems, their college plans and such things; and ke to think that their decision to enter my profession was result of this friendship at the adolescent stage.

Ve must take interest in the vocational guidance clinics "career day" interviews at the high school level. We must ise these youngsters that it is more important for an ryo engineer to get his college entrance requirements ier than mechanical drawing and manual training in high ol; similarly an aspiring C.P.A. needs things of basic ortance rather than commercial arithmetic and bookkeep-

Every professional engineer and accountant can well afford devote a few hours per year to this work in his own com- nity for the future welfare of his chosen profession.

I should like to close my remarks with just one more ob- vation. I have frequently used the terms *profession* and *fessionals*. Perhaps I have used them too loosely. The ilities which seem requisite for recognition as a professional these:

1. Competence in a technical field requiring advanced intellectual training.
2. The necessity for exercise of independent judgment.
3. The acceptance of responsibility.
4. The assumption of authority within the field.
5. A desire to help people, and a willingness to share knowledge and experience with others, within and without the field.
6. An interest in serving the public which goes beyond the selfish instinct to make money.

Professional development is a task which is never finished, ause its goal is unlimited. Its progress depends entirely on the extent to which the members are willing to devote mselves, unselfishly, as you are doing in this conference to ur professional problems.

"An Employer's Viewpoint" was given by Mr. W. W. more, president of Micro Switch and vice president its parent, Minneapolis Honeywell Regulator Com- ny. Mr. Gilmore's experience includes, management nsulting engineering to more than 400 former accounts, ior to his association with Micro Switch. A digest of comments is presented below:

I have a quaint, old-fashioned idea that maybe before you start to solve a problem, you should look at it and find out whether or not a problem really exists, whether the approaches that have been made are correct; and last but not least, what the conditions are surrounding the problem. I will attempt to give you one man's opinion of some things that need attention.

It would seem to me that we people of America have followed our usual pattern by going completely overboard and making our problems much more difficult than they really are. In other words, industry, colleges, and engineers themselves have become the victims of their own propaganda.

First, we know that over the past several years many concerns rushed around the country recruiting brand new engineering diplomas with the idea that they had thereby obtained that many full-fledged engineers. More and more engineers was the answer—throw to the winds training, experience, guidance—just get more engineers!

An effect of this indiscriminate hiring has been to glamorize the name "engineer" until it has become almost an all-inclusive term to set the engineers apart from the rest of the people. In other words, we have acted as if we have forgotten that engineers are real human beings, putting on their pants one leg at a time, just the same as the rest of us—that engineers are people who are charged, like each of us, with the responsibility of making a living for themselves, doing good work in their jobs and helping to produce more and better products for people to use.

My suggestions for the better utilization of engineering man-hours would be:

1. Starting in college and carrying on through into industry, help engineers realize that their work is essential—that somewhere in between (a) the martyrdom complex which was formerly prevalent because management sort of ignored them and set them apart, and (b) the present pedestal upon which propaganda has hoisted them, is probably the right place. They are a part of any business organization and as such their contributions are appreciated, but other parts of the organization also contribute equally to the final success of their efforts—no one person is completely responsible for success. In other words, make them part of the ball team. No one can say that any member of the ball team is not essential. It is only the individual performances that make the various positions stand out.
2. Again, starting in college, teach the engineer that the product of his brain can't be utilized until it is off the drawing boards, tested, put through the pilot run, and finally reaches its ultimate use. Time is always a factor. A product too long delayed, loses value.
3. Select engineering supervisors not only for their fundamental technical knowledge, but for their supervisory abilities and teach them to train and explain, and guide and direct the efforts of that department. Don't have a design engineer doing a clerical job, and realize that any engineer, the same as any individual, can't be all things to all people.
4. Teach the engineer that his education only starts when he gets his diploma (commencement)—that first hand knowledge is always better than book knowledge.
5. The design engineer's goal should be the use of as many standard parts as is possible instead of having to change some little things in order to fed his egotism. In other words, tie horse sense with technical knowledge and common sense—and remember that common sense has to be developed in most of us. Very few of us are born with it completely developed.

(Continued on page 16)

6. Teach engineers to use the service departments of their own organizations rather than always starting from scratch in their quest of knowledge. Accept the knowledge of other men who are also specialists of some branch of the business.
7. Realize that Engineering has much to contribute if minds are kept open—that My way doesn't necessarily mean the best way. Help them to be the best kind of an engineer, utilizing their greatest abilities.
8. For heaven's sake, let's quit believing our own propaganda and stick to the facts of life.

**During a break between sessions, visitors breathe spring on the Bradley U. campus and continue their discussions. Left to right are G. S. Rosenberg of the LeTourneau-Westinghouse Co. and C. D. Evans and W. H. Seacond of the International Harvester Co.**

For comparison, Mr. Robert L. Grover, who received a B.S. degree in Mechanical Engineering from Bradley University in 1955, and who is now in the Research Department on Engineering Development at Caterpillar Tractor, accepted the assignment for the "Employee's Point of View."

Did you ever have anyone ask you to do something and tell him that you would, and then begin to wonder what he actually wanted you to do? That is the way I felt when I began to prepare this talk. Eventually it became clear to me that I had agreed to speak on *Professional Development of Engineers from an Employee's Viewpoint.*

The question that immediately came to my mind was, "Why should an engineer develop himself professionally?" Should he utilize his capabilities simply because it is his job because that is what he is being paid for? Because he is doing what he likes to do? Or could there be some higher reason which is not always thought about? I think the principal answer is that he should develop himself because he is morally obligated to do so by nature of the talents he possesses.

This talk is therefore concerned with an engineer's obligations. These obligations are two-fold: first to himself, and secondly to the company he works for and thereby to industry and society in general.

Let's consider the engineer's obligations to himself, first.

If we can say that an engineer is obligated to use the talents of education and ability that God has given him, it follows that he is also obligated to develop these talents in order to more fully utilize them. Please note the repeated use of the word "obligated." An intelligent man really is not free to choose whether he shall be useful to society or a parasite upon it. He has the moral obligation to contribute his share to the best of his abilities.

I think that we are agreed now that an engineer sho use his talents. The next step is to determine how and in wh manner he can develop his talents for maximum utilizati The main areas, in my opinion, which are most effective the professional development of young engineers are advan education, a solid course in business management, on-the- training, and participation in engineering societies.

Much of what we have been talking about is actually responsibility of the technical supervisor. He sets the pace the development of his subordinates. His own attitude tow professional development will generally be revealed in people. If they raise their own standard of work, his job w definitely be an easier one and more satisfying to him. Te nical supervisors should look for engineers with inquisit minds who realize what their chosen work truly involves, a who have a certain *esprit de corps* concerning engineering a profession. Where this feeling is lacking, or where his e ployees are failing to realize their obligations to utilize th talents, it is his obligation to point them in the right direction that is, teach them not to hide their light under a bushel.

The challenge laid down by the outsider, the employ and the employee was picked up by Dean Frederi Trezise. Dean Trezise is now the Associate Dean Engineering, Chicago Division, University of Illino and has a background of many years of service in e gineering education and consulting assignments.

Mr. E. L. Chandler in the March issue of *Civil Engineeri* makes this statement regarding a *professional* person, "one can rightfully claim to be a *professional* person unless is motivated by a desire for service. *Professionalism* is ide istic. Without idealism there can be no true profession. other words, a profession is based on an attitude of mind, on a class. It is the profession of an Albert Schweitzer Wilfred Grenfell.

The Western Society of Engineers in Chicago in 19 through its Educational Committee, was commissioned ascertain the viewpoint of industrial leaders on the deficienc which they noted in the engineers in their employ. The questi was addressed to 52 concerns of various sizes. Out of inquiries sent out to company presidents, some 30 replies w received. Almost unanimously the 30 companies agreed t the technical training of their engineering employees w competent. The deficiencies noted from a number of lett revolved around the need for supplemental education in t field of the humanities and social sciences.

The findings of the Western Society of Engineers' Co mittee, and the recommendations of the Committee on t *Evaluation of Engineering Education* dated June 15, 19 are strikingly similar. Three paragraphs stand out in t summary of the latter, or Grinter Report:

1. Inclusion of elective subjects to develop the special tale of individual students to serve the varied needs of socie
2. A continuing concentrated effort to strengthen work the humanities and social sciences in the engineeri program.
3. An insistence on the development of a high level performance in the oral, written and graphical commu cation of ideas.

A profession embraces more than a knowledge of te niques, it is a commitment to the practice of a high degree tolerance, objectivity, and integrity based upon a devoted id of social responsibility.

I believe ethics cannot be taught, they must be lived. Th are best conveyed by precept. The example of a highly

ected teacher is the principal factor for the inculcation of alities of honesty and integrity.

The function of a teacher is beyond that of training a stu-nt, correcting papers, and serving as authority for a certain ade at the end of a course. Certainly he is not in the teaching ofession to make money. He must want to teach and must e people. The great personal satisfactions are the com-nsatory marginal satisfactions which cannot be bought and e without price.

We do not hire a teacher to teach subject matter; our achers are engaged to teach students. An instructor should interested in the development of the whole man. We are ore interested in developing good citizens, and all that term plies, than in training engineers in technology. Yes, we ve trained engineers long enough. I believe we must try educate them. I think it is about time we built our own ducation program—the best we know how!

Having coached track in a well-known midwestern college, believe that one admonition to a track man stands out. "Don't ok back—run your own race." I have seen a man, par-cularly in the dashes, lose his head and the race, through a ncern for his competitor's position by looking back. In the gh hurdles, for example, how disastrous it might be in the ythm of one, two, three, over, to look around for your com-etitors.

In educational and science program development, any one the hurdles of missiles, satellites, and propellant, will trip s up if we lose our stride by looking around. With supreme nfidence in our American talent, and in our free, unfettered, road educational program in an atmosphere of free enter-rise, we will be devoid of the reflex of fear in serving the ree world.

The professional development of scientists and engineers hen, which is our broad topic, is service to humanity, not ervice as pawns to a totalitarian state. Engineering and science re creative professions. Any program of education which is et up must be of similar nature, so that it might serve as a rm foundation of scientific and social advancement. It should e sufficiently broad and comprehensive to serve as a thorough rounding in the basic and engineering sciences.

President Dubridge of the California Institute of Tech-ology has stated that one brilliant creative scientist or en-ineer may turn up with more ideas than one hundred ordinary nes. The discovery of the brilliant student in the early years f his school life should be a prime objective. This matter of mphasizing the education of the bright student to bring out is full brilliance, does not violate democratic principles. Edu-ation is the presentation of opportunities to develop to the full hose talents with which a person is gifted.

To summarize:

1. The important aspect of a professional man is an attitude of mind which should be fortified during the years of formal education.
2. Ethics and the values which predominate in a profession are developed through a respect for, and the influence of, a teacher, and not by course content.
3. For effectiveness in a free society, we must become more interested in the quality of student and his opportunity to reach potential.

Following the panel sessions, the entire group ad-journed to the Bradley Campus for a conference sum-mary. Many companies had already introduced various efficient utilization techniques. In this summary, Dr. William G. Torpey, a consultant to the President's Committee, emphasized the conference participants could make gains for their businesses by selecting a few important points applicable to their business, and work intensively on these points. The report from this conference includes a summary list for selection of introductive suggestions to implement in your firm. Dr. Torpey's final conference summary suggested the Bradley University Campus, metaphorically, as an example of effective utilization.

1. The older but fully sound buildings on the campus were compared to the older but sound practices already in use.
2. The new buildings already erected on the campus could be compared to the new practices already put into effect and efficient utilization.
3. The newest buildings under construction could be compared to the newest practices being set in on the utilization foundation.
4. And just as important, the spaces on the campus where buildings are being planned represent the need to study ahead to investigate and critically select or develop practices which will have to be put into effect in the foreseeable.

In total, our country will gain as each and every part of our country makes progress.

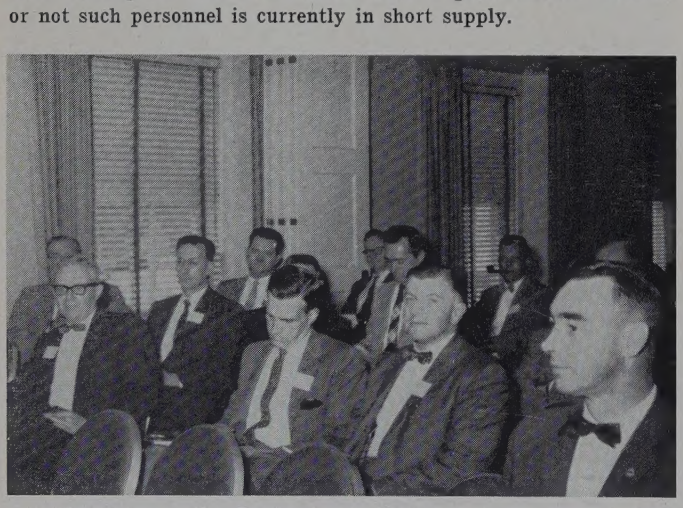
A complete proceeding is being published for circulation to nearly 100 men and two women who attended this conference. Some additional copies are expected to be available. Negotiate with Dean Russell Gibbs, Bradley University, if you wish a copy.

**It's lunch time and Co-Chairman Harold V. Hawkins (left) converses with Dean Russell Gibbs of Bradley U. while Dr. William G. Torpey of the President's Committee on Scientists and Engineers listens to Bradley U. President, Harold P. Rodes.**

## CONFERENCE CANDIDS

C. R. Schad of the Capterpiller Tractor Co., Peoria addressing one of the concurrent sessions. At the table are G. F. Drake of the Woodward Governor Co. of Rockford, W. C. VanDyke of Caterpiller Tractor Co., and (to right) M. L. Jones of the Richards Wilcox Co. of Aurora.

Dr. Torpey and Co-Chairman Harold P. Rodes converse with Dr. Maynard M. Boring before Dr. Boring gave the banquet address. Dr. Boring represented President Eisenhower's Committee on Scientists and Engineers. The President's Committee believes that striving for maximum effectiveness is good business whether or not such personnel is currently in short supply.



"The Role of Non-Professional Assistants" was one of three panel discussions of the afternoon of May 6. The major objectives of the Utilization Conference were to set forth policies and procedures for more effective utilization of engineers, and to motivate conferees to take appropriate action to improve the utilization of such personnel in their own companies and agencies.

John F. Bracken, P.E. (left) looks amazed at the statement from educators Joseph R. Bowman, P.E. and Francis C. Mergen P.E. (right). Bracken lives in Western Springs and works for the Commonwealth Edison Co. Bowman, who is associate dean and professor of science engineering at Northwestern University's Technological Institute, hails from Riverside. Prof. Mergen teaches at Bradley U.

The banquet was held in the La Salle Room of Peoria's Pere Marquette Hotel. Presiding was ISPE's chairman H. V. Hawkins (center). Dr. Maynard M. Boring (left) gave the address. Dr. Hawkins is talking with Russell E. Gibbs, Dean, College of Engineering, Bradley University.

# PROFESSIONAL DIRECTORY



The most trifling thing done solely to please God is ore precious in His sight than all possible austerities nd mighty deeds, promted by vain-glory or self-love; nd that because He looks at the motive which prompts ie deed, rather than at its result.—J. N. Grou.

It is no great matter to live lovingly with good-natured, with humble and meek persons; but he that can do so with the forward, with the wilful, and the ignorant, with the peevish and perverse, he only hath true charity.—Jeremy Taylor.

This soil-cement parking lot for the Audubon National Bank Building in Audubon, N. J., provides ample space for autos at low cost.

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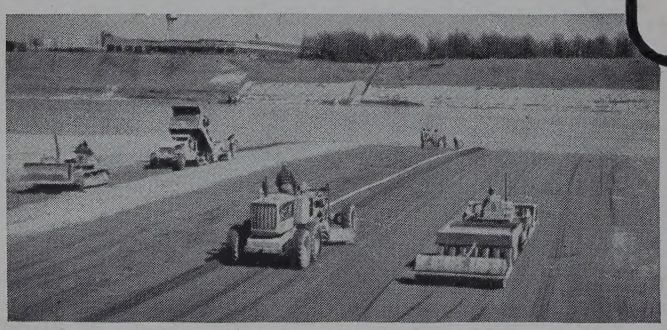

Construction view of Memphis lot shown completed in photo above.

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# SOIL-CEMENT

Soil-cement is an ideal pavement for all types of parking lots. Although low in first cost it puts an end to dust, mud, ruts, soft spots and chuckholes.

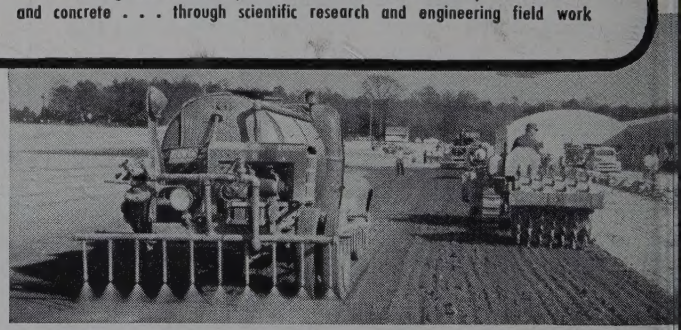
Paving with soil-cement is economical because about 85% of the material needed is the soil or old granular material already on the site. Mixed with portland cement and water, this material provides a sturdy base for any parking lot. A light bituminous surface completes the pavement.

Construction crews quickly learn the simple and easy methods of building soil-cement pavement. The process is fast. An experienced crew can build a good-sized parking lot in a day.

Soil-cement pavements for parking lots, streets, country roads or airports are long-lived. That's because soil-cement is durable—so durable that practically all of the soil-cement pavements built since 1935, when scientific controls were established, are still giving dependable all-weather service with only routine surface maintenance.

Why not use durable, economical soil-cement on your next parking lot paving project? For more information about soil-cement paving for any purpose, write for free illustrated literature. It is distributed only in United States and Canada.

**PORTLAND CEMENT ASSOCIATION**
**111 West Washington Street, Chicago 2, Illinois**
A national organization to improve and extend the uses of portland cement and concrete . . . through scientific research and engineering field work



Building soil-cement parking lot for Cleveland shopping center.